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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/589,339	08/11/2006	David B. Jackson	010-0019-US	5412
40271	7590	08/13/2008	EXAMINER	
NOVAK DRUCE + QUIGG LLP 10415 SOUTHERN MARYLAND BLVD. DUNKIRK, MD 20754				TO, JENNIFER N
ART UNIT		PAPER NUMBER		
2195				
MAIL DATE		DELIVERY MODE		
08/13/2008		PAPER		

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b>	<b>Applicant(s)</b>	
	10/589,339	JACKSON, DAVID B.	
	<b>Examiner</b>	<b>Art Unit</b>	
	JENNIFER N. TO	2195	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) Responsive to communication(s) filed on 07 May 2008.
- 2a) This action is **FINAL**.                    2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) Claim(s) 1-18 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) Claim(s) \_\_\_\_\_ is/are allowed.
- 6) Claim(s) 1-18 is/are rejected.
- 7) Claim(s) \_\_\_\_\_ is/are objected to.
- 8) Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on \_\_\_\_\_ is/are: a) accepted or b) objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) All    b) Some \* c) None of:
1. Certified copies of the priority documents have been received.
  2. Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)          | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ .                                    |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)          | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ .  | 6) <input type="checkbox"/> Other: _____ .                        |

## **DETAILED ACTION**

1. Claims 1-18 are pending for examination.
2. The cross reference related to the application cited in the specification must be updated (i.e. update the relevant status, with PTO serial numbers or patent numbers where appropriate, on page 1, paragraph [0002]).

### ***Claim Rejections - 35 USC § 101***

3. 35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

4. Claims 1-6 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter.

5. The language of claims 1-6 raise a question as to whether the claim is directed merely to an abstract idea that is not tied to any statutory subject matter to thereby producing a useful, concrete, and tangible result to form the basis of statutory subject matter under 35 U.S.C. 101. For example, the claims limitation recited a process of determining availability of compute resources, determining data requirement for processing the job, and determining a co-allocation in time reservation, and performing data pre-staging based on the co-allocation in time reservation. However, nowhere in the claims that shown the process of doing the steps are tied to any machine in order to execute and perform the steps (i.e. a computer implemented method). Thus the claims

are directed to non-statutory subject matter (see case law *In re Bilski* and MPEP 2106.IV.B).

***Claim Rejections - 35 USC § 112***

6. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

7. Claims 1-18 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

- a. The claim language in the following claims is not clearly understood:

i. as per claim 1, line 7, it is not clearly understood what is meant by "performing data pre-staging based on the co-allocation in time reservation" (i.e. predicting a scheduling time for the job to execute).

ii. as per claims 7, 13, they have the same deficiency as claim 1.

Appropriate correction is required.

- b. Claims 1, 7, 13 are rejected under 35 U.S.C. 112, second paragraph, as being incomplete for omitting essential elements, such omission amounting to a gap between the elements. See MPEP § 2172.01. For example, claims 1, 7, 13 recited that determining availability of compute resources to process the submitted job, determining data requirements for processing the job, determining a co-allocation in time reservation, and performing data pre-staging based on the co-allocation in time reservation, but they fail to link the steps determining

availability of compute resources to process the submitted job, determining data requirements for processing the job and the pre-staging data.

***Claim Rejections - 35 USC § 103***

8. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

9. Claims 1-4, 7-10, and 13-16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Le ("The Data-Aware Resource Broker – A Resource Management Scheme For Data Intensive Applications", University of Adelaide, Nov. 2003, pages 1-63).

10. As per claim 1, Le teaches the invention substantially as claim including a method comprising:

determining availability of computer resources in a cluster or grid environment to process the submitted job (page 25, lines 8-11; page 29, lines 11-15; page 30, lines 29-32; page 34, line 5 through page 35, line 19);

determining data requirements for processing the job (fig. 4-1; page 25, lines 5-7; page 35, lines 20-27);

determining a co-allocation in time reservation (page 35, line 28 through page 38, line 4);

performing data pre-staging based on the co-allocation in time reservation and prior to processing the job in the computer environment (page 38, line 6; page 59, lines 13-21).

11. Le did not specifically teach availability of compute resources including availability timeframes of the computer resources to process the submitted job.

12. However, Le disclosed predicting the scheduling of time to execute the submitted job in accordance with the resource availability to process the job at the time the job expected to be executed accordance to the user (page 37, lines 5-12; page 59, lines 13-21).

13. It would have been obvious to one of an ordinary skill in the art at the time the invention was made to have recognized that Le's system would included the time frames available of the compute resources because in order for Le to predict the scheduling of time to execute the submitted job in accordance with the resource availability to process the job at the time the job expected to be executed accordance to the user, Le's system have to known the time available of the resource. Thus one would be motivated to utilize Le' system to efficiently handle the allocations of jobs to available resources in a data grid environment (Le, page 39, lines 13-15).

14. As per claim 2, Le teaches that wherein the data requirements relate to a quantity of data and a speed of migration of the data to the compute resources (page 35, lines 8-16, 28-29).

15. As per claim 3, le teaches that wherein the data requirements for processing the job are at least one of: network information, network speed, faults, statistical fluctuation, delivered bandwidth by the network (page 35, lines 8-16).

16. As per claim 4, Le teaches that wherein the compute resources must be available prior to the completion of the data staging step (Le system predicting the scheduling based on the resource availability, thus the resource must be available before the predicting step).

17. As per claims 7-10, and 13-16, they are rejected for the same reason as claims 1-4 above.

***Allowable Subject Matter***

18. Claims 5-6, 11-12, and 17-18 would be allowable if rewritten to overcome the rejection(s) under 35 U.S.C. 112, 2nd paragraph, and 35 U.S.C. 101 set forth in this Office action and to include all of the limitations of the base claim and any intervening claims.

***Response to Arguments***

19. Applicant's arguments with respect to claims 1-18 have been considered but are moot in view of the new ground(s) of rejection.

***Conclusion***

20. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

21. Any inquiry concerning this communication or earlier communications from the examiner should be directed to JENNIFER N. TO whose telephone number is (571)272-7212. The examiner can normally be reached on M-T 6AM- 3:30 PM, F 6AM- 2:30 PM.

22. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Meng-Ai An can be reached on (571) 272-3756. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Meng-Ai An/  
Supervisory Patent Examiner, Art Unit 2195

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